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The study of prevalence and mean intensity of endoparasite  
(digenea) on thunnus obesus (bigeye tuna) from South China Sea  
/ ur Aina Lyana Mohamad Ali.

PERPUSTAKAAN SULTANAH NUR ZAHIRAH  
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**FAKULTI AGROTEKNOLOGI DAN SAINS MAKANAN  
UNIVERSITI MALAYSIA TERENGGANU**

**PENGAKUAN DAN PENGESAHAN LAPORAN  
PROJEK ILMIAH I DAN II**

Adalah ini diakui dan disahkan bahawa laporan ilmiah bertajuk: The Study of Prevalence and Mean Intensity of Endoparasite (Digenea) on *Thunnus obesus* (Bigeye Tuna) from South China Sea Oleh Nur Aina Lyana Binti Mohamad Ali, No.Matrik Uk13851 telah diperiksa dan semua pembetulan yang disarankan telah dilakukan. Laporan ini dikemukakan kepada **Jabatan Sains Perikanan dan Akuakultur** sebagai memenuhi sebahagian daripada keperluan memperoleh **Ijazah Sarjana Muda Sains Agroteknologi (Akuakultur)** Fakulti Agroteknologi dan Sains Makanan, Universiti Malaysia Terengganu.

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THE STUDY OF PREVALENCE AND MEAN INTENSITY OF ENDOPARASITE  
(DIGENEA) ON *Thunnus obesus*  
(BIGEYE TUNA) FROM SOUTH CHINA SEA

By  
Nur Aina Lyana Binti Mohamad Ali

Research Report submitted in partial fulfillment of  
the requirement for the degree of  
Bachelor of Agrotechnology Science (Aquaculture)

Department of Fisheries Science and Aquaculture  
FACULTY OF AGROTECHNOLOGY AND FOOD SCIENCE  
UNIVERSITI MALAYSIA TERENGGANU  
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## DECLARATION

I hereby declare that the work in this thesis is my own except for quotations and summaries which have been duly acknowledged.

Signature :   
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Matric No : UK13851  
Date : 30 April 2009

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## ABSTRACT

Digenean parasite is one of the parasites that affect marine fishes which cause the fish to be lower in quality and unappealing to eat if the number of parasites is high. Study the parasites on fish can contribute to many aspect includes aquatic pollutants and the migration of fish itself. However, the study on digenea from Tuna in Malaysia is rare. So that I choose this project because tuna is one of fisheries sources in our country. In this study, the prevalence and mean intensity of digenea in bigeye tuna become major aspects. 32 *Thunnus obesus* obtained from South China Sea was dissected to examine digenean parasite from their internal organ. The heart, lymph, pyloric caeca, stomach and intestine was examined under dissecting and compound microscope. All the digenean found was collected and preserved in 70% alcohol in the bijou bottle. The digenea then was stained and drawn under a camera lucida attached to a compound microscope in order to identify the taxonomy of those digenea. The identification was referred to a book written by Yamaguti (1958). The end result shows that 20 *Thunnus obesus* was infected by 2 different digenean parasites known as *Tetrochetus sp.* and *Rhipidocotyle sp.* The prevalence and mean intensity of these digeneans was 62.50% and 6.5 respectively.



## ABSTRAK

Digenea merupakan salah satu parasit yang menyerang ikan marin. Ia boleh menyebabkan kualiti ikan menurun dan menyebabkan isi ikan itu tidak sedap untuk dimakan. Kajian tentang parasit pada ikan boleh menyumbang kepada pelbagai aspek kajian lain termasuklah pencemaran akuatik dan migrasi ikan tersebut. Walaubagaimanapun kajian tentang parasit digenea daripada tuna amat jarang dilakukan di Malaysia. Oleh sebab itu saya memilih permasalahan ini sebagai kajian saya memandangkan tuna merupakan salah satu sumber perikanan penting di Malaysia. Di dalam kajian yang dijalankan ini kelaziman dan keamatan purata menjadi aspek utama. Sebanyak 32 ekor ikan Aya Hitam (*Thunnus obesus*) telah diperiksa di bawah mikroskop pembedahan dan mikroskop cahaya untuk mengkaji kehadiran parasit digenea di dalam organ dalamannya. Digenea – digenea yang ditemui kemudiannya disimpan di dalam alkohol 70 % di dalam botol Bijou. Digenea kemudian diwarnakan supaya organ dalamannya boleh dikenalpasti. Pengenalpastian digenea dibuat mengikut organ dalamannya berdasarkan lakaran daripada lukisan di bawah kamera Lucida yang disambung kepada mikroskop cahaya. Pengenalpastian taksonomi digenea dirujuk kepada buku Yamaguti (1958). Di akhir eksperimen, didapati sebanyak 20 ekor daripada 32 ekor Aya Hitam telah dijangkiti oleh 2 genus digenea yang berbeza iaitu *Tetrochetus* sp. dan *Rhipidocotyle* sp. Kelaziman ikan yang dijangkiti adalah 62.50% manakala purata digenea dalam setiap ikan yang dijangkiti adalah 6.5.